CITY OF LAS VEGAS	Public Works Department City Engineering Division Offsite Inspection and Testing Section	Procedure No.: PWOIT – MT 105
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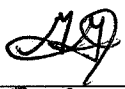
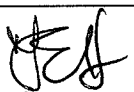
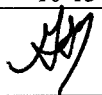
Revision Number	Prepared By	Reviewed By	Approved By	Date Issued
0	GGJ	GGJ	BM	GGJ
Date	1-7-96	5-12-96	9-3-96	9-3-96
1	GGJ	GGJ	DM	GGJ
Date	11-8-00	9-17-01	9-17-01	9-17-01
2	GGJ	GGJ	DM	GGJ
Date	10-5-01	12-12-01	12-12-01	3-1-02
3	GGJ	GGJ	DWM	GGJ
Date	6-19-03	6-25-03	7-1-03	7-1-03
4	GGJ	GGJ	DWM	GGJ
Date	8-11-04	8-24-04	8-30-04	8-30-04
5	GGJ	GGJ	TEH	GGJ
Date	3-10-05	5-24-05	6-6-05	6-6-05
6	GGJ	GGJ	TEH	GGJ
Date	5-17-06	3-8-07	3-8-07	3-8-07
7	GGJ	GGJ	TEH	GGJ
Date	11-6-07	9-24-08	10-13-08	10-13-08
8				
Date	3-8-10	6-22-10	6-28-10	6-28-10
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DEPARTMENT OF PUBLIC WORKS
CITY ENGINEER DIVISION
Offsite Inspection and Testing Section

City of Las Vegas
Pavement Section Design Verification Report

Procedure No. PWOIT-MT 105 Revision *8*

The italicized and underlined sections of this policy note Revision 8 changes.

1.0 PURPOSE:

1.1 This policy establishes the guidelines by which the City of Las Vegas (CLV) will review and approve a Pavement Section Design Verification Report for public / private offsite improvement areas. The pavement section limits are from the top of the street subgrade to the top of the asphalt pavement. The CLV limits their monitoring of the pavement section operations to periodic Quality Assurance (QA) density testing of finish subgrade, and QA confirmation density testing of aggregate base materials, for public / private offsite improvements areas.

1.2 A Final Pavement Section Design Verification Report is required to be submitted for review and approval *dependent upon the project Scope of Work.*

NOTE 1: Alley's and projects with only new Turn Lanes do not typically require the submittal of this report. For projects with these items, verify the requirements with the CLV Offsite Inspector.

NOTE 2: Recommendations requiring the use of Geotextiles will require a report verifying the pavement section is built in compliance with the Geotechnical Engineer's recommendation.

2.0 REFERENCE CODES AND STANDARDS:

2.1 Associated CLV Procedures:

2.1.1 PWOIT MT 101 "Submittal of Reports".

2.2 Clark County Uniform Standard Specification:

2.2.1 Section 105, "Control of Work".

2.3 Other:

2.3.1 NRS 338.176, NAC 625.550, the most current ASTM, AASHTO, NDOT test procedures as indicated in the applicable sections of the Uniform Standard Specifications.

3.0 STATEMENT OF POLICY:

3.1 Submittal:

3.1.1 Submittal format shall be completed in accordance with the current CLV procedure and in compliance with the NRS 338.176 and NAC 625.550 statutes.

3.1.2 The project developer or their representative, the project Quality Control Company (QC) shall submit a transmittal letter and Pavement Section Design Verification Report to the CLV for review and approval.

3.1.3 This report shall be submitted after the completion of the grading operations (including any over excavation and Trench Backfill) within the off-site right-of-way street area. The report shall be approved by CLV prior to the QC / QA testing of the subgrade for placement of Type I or Type II Aggregate Base material.

4.0 REPORT:

4.1 General Requirements for Report Content:

4.1.1 The report shall include, at a minimum, the following information:

4.1.1.1 Copy of CLV approved Geotechnical Review Letter.

4.1.1.2 Revised reports shall include the date, for the report being superseded, as well as the revision date.

4.1.1.3 Project / Permit Name.

4.1.1.4 Project / Permit Number.

4.1.1.5 Project / Permit Plan Number.

4.1.1.6 Referenced reports shall be identified by the QC report issue date and CLV acceptance letter date.

4.1.1.7 The report must be prepared by, or under the direction of, a Professional Engineer registered in the State of Nevada. The report must be signed and stamped by the responsible engineer.

4.1.1.8 Use the appropriate approved project Plan and Profile sheets to determine the specific location for the area being submitted for review and acceptance **for this report**. The locations shall be noted in the text of the report in a similar format as shown below:

Table 1

Street Name	ROW	Design R-Value	Station Number	to	Station Number

NOTE *3*: If street names are revised after a construction phase report has been submitted to the CLV and approved by the CLV, subsequent construction phase reports shall reference the original street name as well as the revised street name.

NOTE 4: Information / Test data from areas requiring over excavation, prepared areas to receive fill, and the fill material being placed shall be included with this report. The test data shall be as noted in section 5.2

4.1.1.9 The report shall contain a statement that verifies that the over excavation process and material (if required) and the pavement sections complies with the recommendations of the project geotechnical report, project plans, specifications, and current CLV policy and procedures.

4.1.1.10 Minimum subgrade density requirement.

4.1.1.11 Pavement Section Recommendation by the Engineer.

4.1.1.12 ROW.

4.1.1.13 Design R-Value and Curve.

4.1.1.14 Sieve Analysis.

4.1.1.15 Liquid Limit and Plastic Index.

4.1.1.16 Proctor information per current AASHTO procedure and curve for each material type.

4.1.1.17 Plot plan of streets with sample locations and areas indicated that are represented by the samples. The accepted area shall be in such a manner that the area is identifiable on "Xerox" copies.

4.1.1.18 If testing is provided by another laboratory, that data shall be stamped by the responsible engineer and included in the report.

4.2 Additional Requirements for Interim Report:

4.2.1 Interim (partial area release) reports for specific areas of work (i.e., interior / exterior street areas and / or portion of those areas) are acceptable, but shall be referenced in the Final Pavement Section Design Verification Report.

4.2.2 The report title shall be **Interim Pavement Section Design Verification Report**.

4.2.3 Referenced CLV approved reports.

4.2.3.1 Interim / Final Trench Backfill Report

4.2.4 Report information / test data included with approved reports, per section 4.1.1.6, shall not be included with the Final Report

4.3 Additional Requirements for Final Report:

4.3.1 This is the **last report**, for this phase of work, if Interim Reports were issued. It is the **only report** if Interim Reports were not issued.

4.3.2 The report title shall be **Final Pavement Section Design Verification Report.**

4.3.3 Referenced CLV approved reports.

4.3.3.1 Final Trench Backfill Report

4.3.3.2 Interim Pavement Section Design Verification Report

4.3.4 Report information / test data included with approved reports, per section 4.1.1.6, shall not be included with the Final Report

5.0 SAMPLING AND TESTING:

5.1 R-Value

5.1.1 Sampling shall not be performed in the street until the utility trenches have been backfilled and the street subgrade has been completely exposed at the approved proposed subgrade elevation. The sampled material shall be obtained from the final subgrade elevation to a depth of two (2) feet below final subgrade elevation.

5.1.2 The material must be obtained and tested by a laboratory that is AASHTO Accredited in the procedures being reported. The most current ASTM, AASHTO, NDOT test procedures shall be used. Testing requirements shall be from the applicable sections of the Uniform Standard Specifications and current CLV policies and procedures.

NOTE *5*: The requirement for the AASHTO Accreditation is mandatory for all laboratories performing work submitted to the City of Las Vegas, Offsite Inspection and Testing, effective March 1, 2008. Laboratories that are not accredited in the test procedures being submitted shall contact the City of Las Vegas, Offsite Inspection and Testing, prior to submitting the test information.

5.1.3 A sample for R-Value testing including Sieve Analysis and Plasticity Index shall be obtained and tested every 1000 lineal feet and fraction thereof. If interior and exterior streets are included in the project, representative samples shall be obtained form both areas.

5.1.4 Testing for R-Values may be reduced to one (1) test per project if the engineer confirms, through associated testing (sieve analysis, plasticity index), that the soil classification of the R-Value tested sample is consistent with the soil classification of the proposed subgrade material throughout the limits of the project. A minimum of two (2) samples is required for each project to verify the consistency of the soils classification.

5.1.5 If the recommendation for the pavement design is included in the project Geotechnical Investigation Report, the verification of the recommendations shall follow the same procedure as the outlined above (except that additional R-Values may be waived by the agency if a sieve analysis and plasticity index was performed on the R-Value sample) in the off-site area after the grading operation has been completed.

5.2 Density Tests

5.2.1 Test data shall be typed and contain the following minimum information;

1. Test number
2. Test date
3. Test location (per project grading plan)
4. Test station number (per project grading plan)
5. Test elevation (per project plan)
6. Depth of fill
7. Dry Density
8. Moisture Content
9. Gauge serial number
10. Gauge density / moisture count for each test
11. Direct transmission depth of test (i.e. 6", 8" etc.)
12. MDD
13. Optimum Moisture for MDD
14. Test results
15. Test requirement
16. Pass / Fail

5.2.2 Proctor information per current AASHTO T180 procedure and include a curve for each material type

6.0 EFFECTIVE DATE AND APPROVALS:

EFFECTIVE DATE: July 1, 2010

6-28-10

Thomas Hayes, P.E. Date
City of Las Vegas
Land Development / Offsite Inspection and Testing *Manager*

6-28-10

Gary G. Johnson Date
City of Las Vegas
Construction Testing Supervisor